



National Aeronautics and
Space Administration
Lyndon B. Johnson Space Center
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Crosswalk caution

Close call reports spark SR&QA investigations of crosswalk safety. Story on Page 3.



Great Wall

Archeologists use space radar images from '94 missions to dig up ancient facts. Story on Page 4.

Space News Roundup

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JSC Photo by Benny Benavides

EMERGENCY RESPONSE—Ellington Field firefighters rescue victims from a NASA T-38 during an aircraft mishap simulation held this week. The drill was conducted to help JSC, the City of Houston and the Air National Guard coordinate efforts in the case of an actual mishap.

Priroda module docks with Mir station today

By Kyle Herring

Cosmonauts aboard Russian's Mir Space Station will be busy today with the docking of the new Priroda science module.

Priroda or 'Nature,' launched at 6:48 a.m. CDT Tuesday, from the Baikonur Cosmodrome. Priroda will be used primarily to study the Earth for ecological and environmental purposes.

Cosmonaut Sergei Krikalev told the crew that some replanning will be done in anticipation of Priroda's arrival today. Batteries mounted inside the module used to provide electricity while en route to Mir will have to be disconnected and saved until the Progress resupply craft arrives in mid-May. The batteries will be stored inside Progress and disposed of when the craft undocks and burns up in the Earth's atmosphere. Space walks on May 6 and 8 will be rescheduled to allow for the battery removal from Priroda.

On Wednesday, Cosmonaut Researcher Shannon Lucid sent a hello to students involved in the Jason Project currently under way in Teague Auditorium. The Jason Project is an event held once a year in a variety of locations, including JSC, that gives students the opportunity to interactively explore different sections of the Earth. This year's project is focused on underwater exploration in the Florida Keys.

The crew also took time out Wednesday to talk with Good Morning America. When asked about communication with friends and relatives, Lucid said, "Due to Norm's (Thagard) fine comments and his pioneering efforts, we have been able to improve communications quite a bit. My communication with my family and with Moscow control center have been improved. I am also getting news of what is happening in the world at lot more than Norm. I appreciate all Norm's comments because it has improved my time here."

Meanwhile, a small internal leak in one of the two coolant loops which runs along the wall of the core module was detected early last week when a slight pressure decrease was noticed. The crew has spent some time looking for the leak with no success. The loop has been turned off and the alternate, or redundant loop, is being used. There is no health risk to the crew and the search has had little impact on science operations. The onboard condensate collector—used to remove humidity from the cabin atmosphere—is operating to prevent any chance of contaminating the drinking water.

The crew took time off the second weekend in April as Mir Commander Yuri Onufrienko, Flight Engineer-1 Yuri Usachev and Lucid celebrated Cosmonautics Day. The crew had the weekend off in celebration of the Orthodox Easter on Sunday. Family members, colleagues and guests talked to the crew members during audio and video links to the station throughout the weekend and this week.

The crew completed work with the Optizon Liquid Phase Sintering Experiment. Sample processing has continued nearly every day with the crew processing metallurgical samples in vials heated in a high temperature furnace on Mir. Each vial contains 5 samples. OLIPSE processing was complete last weekend.

The Space Acceleration Measurement System is continuing to be strategically placed at various locations throughout the station to measure the slightest movements that can assist experimenters in correlating any changes noticed in data postflight. SAMS will be located in Priroda as well and a summary schedule has been laid out with Russian flight planners as to specific locations for the unit once the module arrives.

Periodic radiation measurements are being taken by the crew as rou-

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Crew completes launch test

By Linda Copley

Preparations for the launch of STS-77 aboard *Endeavour* continued this week as the crew and launch controllers completed a dress rehearsal of the launch countdown Wednesday.

The STS-77 crew—Commander John Casper, Pilot Curt Brown and Mission Specialists Andy Thomas, Dan Bursch, Mario Runco and Marc Garneau—flew to Kennedy Space Center Monday for the launch rehearsal, or Terminal Countdown Demonstration Test. Tuesday's activities included mission training and briefings, and opportunities for the commander and pilot to practice landings in the Shuttle Training Aircraft.

STS-77, NASA's 77th space shuttle mission and the fourth this year, is currently targeted for launch on May 16 at 5:32 a.m. CDT. An exact launch date will be determined at the Flight Readiness Review on May 7.

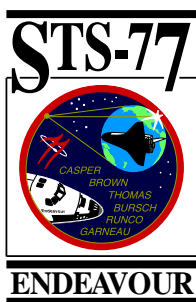
During the planned 10-day mission, astronauts will perform a total of four rendezvous operations with two research satellites—the most ever in a single space shuttle flight. The crew will deploy the SPARTAN-207 spacecraft with the Inflatable Antenna Experiment and

conduct station-keeping operations with a satellite called the PAMS/STU, which will investigate a new laser-based attitude system.

Endeavour will be carrying the SPACEHAB module containing a variety of experiments in addition to a dozen Get Away Special canisters mounted in the cargo bay, sponsored by investigators from the U.S., Canada and Europe.

Columbia is undergoing routine maintenance in preparation for the STS-78 flight, scheduled for launch June 20. Commander Tom Henricks, Pilot Kevin Kregel and crew members Susan Helms, Rick Linnehan, Chuck Brady, Jean-Jacques Favier and Bob Thirsk will conduct international research aboard the 16-day Life and Microgravity Spacelab mission.

Atlantis is being readied for the late July flight of STS-79, which is scheduled to rendezvous with the Russian Mir Space Station under Commander Bill Readdy. Cosmonaut Researcher Shannon Lucid will be picked up after almost five months aboard the Mir station, replaced by fellow Astronaut John Blaha who will serve a five-month tour of duty as a Mir crew member.



Aerospace Commission gets first-hand look at JSC

By Amy Kennedy-Reynolds

The Texas Aerospace Commission spent an entire day last month taking tours, receiving programmatic briefings and getting a first-hand look at what goes on at JSC.

The commission, comprised of nine advisory board members appointed by the Governor, is chartered with the responsibility to promote the aerospace industry across the state of Texas.

Commissioners who toured JSC included David Carr, the chairman, from Austin; Walt Cunningham of Houston; Bill Juett from Amarillo; Lee Kaplan of Houston; Ann McNamara from Dallas; Jim Royer of Houston; Bryon Sehlke from Austin; T.C. Selman of Angleton; and Norman Webb of Midland.

In meetings with JSC Director George Abbey, plans for several potential joint projects and ventures for the Aerospace Commission and JSC were discussed. As TAC

Chairman David Carr stated more than once, "the Texas Aerospace Commission is here to serve the Johnson Space Center and the aerospace community here in Texas. We want to do whatever possible to make this

working relationship with JSC productive and beneficial for all those involved. We are here to help, and for us that means becoming extremely effective advocates for the U.S. space program, as well as the aviation industry. Please just let us know how we can help."

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JSC Photo by Mark Sowa

EARTH DAY—JSC employees check out the different displays in Teague Auditorium during the Earth Day celebration held Monday. The JSC celebration included 25-30 exhibits by local organizations and environmental agencies who provided information on ecological, environmental, recreational and other Earth friendly subjects.

MOD cohosts security conference

"Risk Management — Internet Gains and Losses," is the topic of the fourth annual Technology for Information Security Conference set for May 13-16 at the Marriott Hotel in Houston's Galleria area.

The Mission Operations Directorate and the Gulf Coast Chapter of the Information Systems Security Association will bring together security professionals, leaders in the use of security methods and tools, managers of private and federal information technology centers, experts in criminal justice and consultants on disaster recovery, intrusion detection and risk management for programs, panel discussions and workshops during the three-day conference.

Topics of this year's conference Please see **SECURITY**, Page 4